

Columbia Gas of Kentucky
Columbia Gas of Maryland
Columbia Gas of Ohio
Columbia Gas of Pennsylvania
Columbia Gas of Virginia

NiSource Companies

MATERIALS FOR CUSTOMER SERVICE LINES - CDC

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INTRODUCTION

This manual is the listing of approved materials for customer service lines, and supplements the Standards for Customer Service Lines, Meters, and Service Regulators (Plumber's Guide), for Columbia Gas distribution companies (excluding Columbia Gas of Massachusetts) of NiSource, Inc.¹ (the Gas Company). For materials over 2" other than plastic pipe, refer to the Gas Company for customer's service line and the National Fuel Gas Code for customer's house piping.

The listed materials have been qualified by the Gas Company through testing to ensure their conformance with the gas piping standards included in the Plumber's Guide. Materials subsequently submitted for qualification and found to be in accordance with the Plumber's Guide will be added to this manual. In addition, materials presently included in the listing that, upon testing by the Gas Company, fail to continue to conform to the standards in the Plumber's Guide will be deleted from the listing.

Changes from previous edition (December 12, 2007)

Additions

1. The HDPE model for Performance Pipe is updated from DRISCOPEX 6800 to YELLOWSTRIPE 8300 in Section 1.1.
2. Section 4 has been renamed from "Domestic Meter Settings" to "Meter Settings."
3. Mechanical Specialties (division of R.W. Lyall) has been added as an approved meter setting fabricator.
4. The Single Domestic Meter Settings in Section 4.1 have been updated. Prior models can continue to be used up while the new ones are transitioned in.
5. Meter settings with 1 1/4" regulators and for 1 1/4" meters (Class 425/630) have been added to Section 4.1.
6. In Section 7.2, updated the list for current cold applied laminated tapes, and removed heat shrink sleeves as they are no longer used by the Gas Company.
7. In Section 7.3, cold-applied mastics (Section 7.3) have been removed as they are no longer used by the Gas Company.
8. Central Plastics is approved for factory-assembled flex risers with PE2406/2708 plastic. These will be listed in Section 8.3.

Deletions

(None)

Other Modifications

(None)

¹ The companies are: Columbia Gas of Kentucky (CKY), Columbia Gas of Ohio (COH), Columbia Gas of Maryland (CMD), Columbia Gas of Pennsylvania (CPA), and Columbia Gas of Virginia (CGV).

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Plastic Pipe and Tubing

1.1 Approved Sizes and Manufacturers

For Service Lines, and Buried House Lines, Insert Renewal of Existing Service Lines, Gas Grill and Gas Light Installations

Sizes

The following sizes of PE2406/PE2708 medium-density and PE3408/PE3608/PE4710 high-density polyethylene pipe or tubing are qualified for use underground:

Medium Density (Yellow)

1/2" CTS (5/8" OD) X 0.090" Wall
1" CTS (1-1/8" OD) X 0.099" Wall
1-1/4" IPS X SDR-10
2" IPS X SDR-11
3" IPS X SDR-11.5
4" IPS X SDR-11.5
6" IPS X SDR-13.5
8" IPS X SDR-13.5

High Density (Black)

1/2" CTS (5/8" OD) X 0.090" Wall
1" CTS (1-1/8" OD) X 0.101" Wall
1-1/4" IPS X SDR-11
2" IPS X SDR-11
3" IPS X SDR-11
4" IPS X SDR-11
6" IPS X SDR-11
8" IPS X SDR-11

Manufacturers

The manufacturers listed below are approved extruders for sizes shown. Plastic pipe purchased from these manufacturers must meet Columbia Material Standards Index No. 13.

<u>Manufacturer</u>	<u>Pipe Name</u>	<u>Classification</u>	<u>Color</u>	<u>Sizes Approved</u>
Appalachian Piping Products	GAS PIPE	PE2406/PE 2708	Yellow	1/2" CTS – 2" IPS
Charter Plastics	NATURAL GAS PIPE	PE2406/PE 2708	Yellow	1/2" CTS – 4" IPS
	NATURAL GAS PIPE	PE3408/PE3608	Black	1/2" CTS – 2" IPS
Cresline Plastic Pipe Co, Inc.	YELLOW GAS PIPE	PE2406/PE 2708	Yellow	1/2" CTS – 4" IPS
Endot Industries, Inc.	YELLOW GAS PIPE	PE2406/PE 2708	Yellow	1/2" CTS – 4" IPS
Flying "W" Plastics	TITAN II	PE2406/PE 2708	Yellow	1/2" CTS – 2" IPS
	SPARTAN	PE3408/PE3608	Black	1/2" CTS – 2" IPS
Oil Creek Plastics	GAS PIPE	PE2406/PE 2708	Yellow	1/2" CTS – 6" IPS
	GAS PIPE	PE3408/PE3608	Black	1/2" CTS – 6" IPS
Performance Pipe	DRISCOPEX 6500	PE2406/PE 2708	Yellow	1/2" CTS – 8" IPS
	YELLOWSTRIPE 8300	PE3408/PE4710	Black	1/2" CTS – 8" IPS
PolyPipe	POLYPIPE GDY20	PE2406/PE 2708	Yellow	1/2" CTS – 8" IPS
	POLYPIPE GDB30	PE3408/PE3608	Black	1/2" CTS – 8" IPS
Silver-Line Plastics Corporation	SILVER LINE GAS	PE2406/PE 2708	Yellow	1/2" CTS – 4" IPS
	SILVER LINE GAS	PE3408/PE3608	Black	1/2" CTS – 4" IPS
USPoly Company	UAC 2000	PE2406/PE 2708	Yellow	1/2" CTS – 8" IPS
	UAC ULTRA STRIPE	PE3408/PE3608/PE4710	Black	1/2" CTS – 8" IPS

Plastic Pipe and Tubing

1.2 Tracer Wire Specifications

When tracer wire is installed for service line locating as required by the Plumber's Guide, it shall be approved by the company according to the following specifications.

Specifications: Tracer wire shall be either solid copper or company-approved (see listing below) copper clad to a solid steel core wire. The minimum wire gauge is #14, except in Pennsylvania and Maryland where it is #12. The wire must have a protective coating (jacket) consisting of a high-molecular weight polyethylene or thermosetting (TW or PVC) plastic. The jacket color should be yellow.

Copper clad steel tracer wire

This type of tracer wire has a steel wire core, with a layer of copper "cladded" to its outside. A protective coating (jacket) is then applied to protect the copper from the underground environment, just as with solid copper tracer wire.

<u>Manufacturer</u>	<u>Part No.</u>	<u>Wire Gauge</u>	<u>Description</u>
Copperhead Industries	1230Y-HS-500	12	#12 AWG Reinforced Tracer Wire, 500' spools: Direct burial #12 AWG solid (0.0808" conductor diameter), 21% conductivity annealed copper-clad high carbon steel high strength tracer wire, 380# average tensile break load, 30 mil. high molecular weight-high density yellow polyethylene jacket complying with ASTM D-1248, 30 volt rating.
	1430Y-HS-500	14	#14 AWG Reinforced Tracer Wire, 500' spools: Direct burial #14 AWG solid (0.0641" conductor diameter), 21% conductivity annealed copper-clad high carbon steel high strength tracer wire, 230# average tensile break load, 30 mil. high molecular weight-high density yellow polyethylene jacket complying with ASTM D-1248, 30 volt rating.

NOTES: Minimum #12 AWG is required for (directional) boring installations.
 45 mil. coating available for (directional) boring installations.
 Other spool lengths available.

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Adapter Fittings

2.1 Service Head

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
Normac	1093-A-101	Service Head Adapter (Inside Meter Setting Only) 2" MIPS X 1-1/4" FIPS X 1" CTS Compression With Lock Stiffener for 0.099" Wall Tubing
	1093-Z-L-11	Service Head Adapter 3" FPT X 2" Compression X 4" MPT with Lock Stiffener for SDR-11
	1093-L-090	Service Head Adapter (Inside Meter Setting Only) 1" MIPS X 1" FIPS X 1/2" CTS Compression With Lock Stiffener for 0.090" Wall Tubing
Inner-Tite	F-4000	Service Head Adapter, 1-1/4" FIPS X 1" CTS (0.099" Wall) X 1-1/4" MIPS
Continental	0842-44-0915-16	Service Head Adapter, 1-1/4" MPT X 1" CTS (0.099" Wall) X 1-1/4" FPT
Dresser	0502-0019-001	Service Head Adapter 1-1/4" MIPT X 1-1/4" FIPT X 1" CTS (0.099" Wall)
USPoly	850060606330	Service Head Adapter, 3/4" MPT X 1/2" CTS Plastic 0.090 X 3/4" FPT.
	850081011334	Service Head Adapter, 1" MPT X 1" CTS 0.099/0.102 X 1-1/4" FPT
	850101416650	Service Head Adapter, 1-1/4" MPT X 1-1/4" SDR-11 X 2" FPT
	850101416655	Service Head Adapter, 1-1/4" MPT X 1-1/4" SDR-10 X 2" FPT
Perfection*	71140	Service Head Adapter, 1" MPT X 1/2" CTS 0.090" X 3/4" FPT
	71151	Service Head Adapter, 1" MPT X 1" CTS 0.099/0.102 X 1-1/4" FPT
	71154	Service Head Adapter, 1-1/4" MPT X 1" CTS 0.099/0.102 X 1-1/4" FPT
	71190	Service Head Adapter, 1-1/4" MPT X 1-1/4" IPS SDR-10 X 2" FPT
	71191	Service Head Adapter, 1-1/4" MPT X 1-1/4" IPS SDR-11 X 2" FPT

* Perfection's Servi-Sert adapters no longer (after September 2004) include the O-ring for below-ground applications.

The same 1" CTS fitting can be used for both 0.099" wall (yellow) and 0.101" wall (black) pipe.

Adapter Fittings

2.2 Meter Set and Basement Tee

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
Normac	1760-A-11	Meter Set Adapter, 2" FIPS X 1-1/4" MIPS X 1-1/4" Compression with Lock Stiffener for SDR-11 Pipe
	1760-A-10	Meter Set Adapter, 2" FIPS X 1-1/4" MIPS X 1-1/4" Compression with Lock Stiffener for SDR-10 Pipe
	1761-A-11	Meter Set Adapter, 2" FIPS X 2" MIPS X 1-1/4" Compression with Lock Stiffener for SDR-11 Pipe
	1761-A-10	Meter Set Adapter, 2" FIPS X 2" MIPS X 1-1/4" Compression with Lock Stiffener for SDR-10 Pipe
Inner-Tite	F-4600	Basement Tee, 1-1/4" FIPS X 1" CTS (0.099" Wall) 1-1/4" FIPS

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Adapter Fittings

2.3 Curb Valve

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
Normac	676	Curb adapter, combination 1" MPT or 1" plain end X 1" CTS compression with attachment point for anode wire
	679	Curb adapter with anode, P/N 676 (combination 1" MPT or 1" plain end X 1" CTS compression with attachment point for anode wire) complete with 3# high potential magnesium anode
	686	Curb adapter, combination 1-1/4" MPT or 1-1/4" plain end X 1" CTS compression with attachment point for anode wire
	689	Curb adapter with anode, P/N 686 (combination 1-1/4" MPT or 1-1/4" plain end X 1" CTS compression with attachment point for anode wire) complete with 3# high potential magnesium anode
Continental	9942-99-0203-00	Adapter Coupling, 5/8" OD .090 Wall X 1" MPT, W/Nico-Press Sleeve
	9942-99-0204-00	Adapter Coupling, 5/8" OD .090 Wall X 1-1/4" MPT, W/Nico-Press Sleeve
	9942-99-0205-00	Adapter Coupling, 1-1/8" OD .099/.101 Wall X 1" MPT, W/Nico-Press Sleeve
	9942-99-0206-00	Adapter Coupling, 1-1/8" OD .099/.101 Wall X 1-1/4" MPT, W/Nico-Press Sleeve
Chicago Fittings	M557C43S100SPX	Curb Adapter, "CFC", 1" MPT or 1" Plain End X 1" CTS Plastic Compression End with Lock Stiffener for 0.099" Wall Tubing with Anode Connector.
	M557C43S100SPX-K	Curb Adapter, "CFC" & Anode Kit, Part # M557C43S100SPX (1" MPT or 1" Plain End X 1" CTS Plastic Compression End with Lock Stiffener for 0.099" Wall Tubing with Anode Connector) complete with 3# High Potential Magnesium Anode.
	M557C44S100SPX	Curb Adapter, "CFC", 1-1/4" MPT or 1-1/4" Plain End X 1" CTS Plastic Compression End with Lock Stiffener for 0.099" Wall Tubing with Anode Connector.
	M557C44S100SPX-K	Curb Adapter, "CFC" & Anode Kit, Part # M557C44S100SPX (1-1/4" MPT or 1-1/4" Plain End X 1" CTS Plastic Compression End with Lock Stiffener for 0.099" Wall Tubing with Anode Connector) complete with 3# High Potential Magnesium Anode.
	M557C3S090SPX	Curb Adapter, "CFC", 1" MPT or 1" Plain End X 1/2" CTS Plastic Compression End with Lock Stiffener for 0.090" Wall Tubing with Anode Connector.
	M557C3S090SPX-K	Curb Adapter, "CFC" & Anode Kit, Part # M557C3S090SPX (1" MPT or 1" Plain End X 1/2" CTS Plastic Compression End with Lock Stiffener for 0.090" Wall Tubing with anode connector) complete with 3# High Potential Magnesium Anode.
	M557C4S090SPX	Curb Adapter, "CFC", 1-1/4" MPT or 1-1/4" Plain End X 1/2" CTS Plastic Compression End with Lock Stiffener for 0.090" Wall Tubing with Anode Connector.

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	M557C4S090SPX-K	Curb Adapter, "CFC" & Anode Kit, Part # M557C3S090SPX (1-1/4" MPT or 1-1/4" Plain End X 1/2" CTS Plastic Compression End with Lock Stiffener for 0.090" Wall Tubing with Anode Connector) complete with 3# High Potential Magnesium Anode
USPoly	341321130802	Male Compression Adapter, 1" MPT X 1" CTS SDR-11/11.5, with anode lug
	341661130802	Male Compression Adapter, 1-1/4" MPT X 1" CTS SDR-11/11.5, with anode lug

Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

Fittings molded with PE2406/2708 resin (yellow) are ONLY used with medium-density (yellow) piping. Black molded fittings (PE3408/3608 or PE4710/PE100) can be used with either medium- or high-density (black) piping.

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
Dresser	0090-1709-537	1-1/4"	Coupling, Compression, Plasti-Lok, *Coated, Anode Connector, With Two (2) SDR-10 Insert Stiffeners
	0090-1704-537	1-1/4"	Coupling, Compression, Plasti-Lok, *Coated, Anode Connector, With Two (2) SDR-11 Insert Stiffeners
	0090-1714-537	1-1/4"	Coupling, Compression, Plasti-Lok, *Coated, Anode Connection With One (1) SDR-10 and One (1) SDR-11 Insert Stiffener
	0090-1706-537	2"	Coupling, Compression, Plasti-Lok, *Coated, Anode Connector, With Two (2) SDR-11 Insert Stiffener
	2090-0734-011	1-1/4"	Insert Stiffener, Lock Type, SDR-10 (For Use in Plasti-Lok Fittings Only)
	2090-0729-011	1-1/4"	Insert Stiffener, Lock Type, SDR-11 (For Use in Plasti-Lok Fittings Only)
	2090-0731-011	2"	Insert Stiffener, Lock Type, SDR-11 (For Use in Plasti-Lok Fittings Only)
	0401-0006-001	1/2" CTS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.090" Wall Tubing
	0401-0015-001	1" CTS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.099" Wall Tubing
	0401-0130-001	1/2" CTS	El, 90°, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.090" Wall Tubing
	0401-0139-001	1" CTS	El, 90°, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.099" Wall Tubing
	0401-0056-001	1/2" CTS	Tee, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.090" Wall Tubing
	0401-0065-001	1" CTS	Tee, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.099" Wall Tubing
	0401-0081-001	1/2" CTS	Cap, Plastic Body, Compression Nut End, With Integral Stiffener for 0.090" Wall Tubing
	0401-0090-001	1" CTS	Cap, Plastic Body, Compression Nut End, With Integral Stiffener for 0.099" Wall Tubing

* E-Coat Primer Coated.

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Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
Normac	51-B-P-101	1" CTS	Ell, 90°, Compression, Bare, Anode Connector, With Two (2) 0.099" Lock Stiffeners
	87-A-PW-10	1-1/4"	Ell, 90°, Compression, Bare, Anode Connector, With Two (2) SDR-10 Lock Stiffeners
	87-A-PW-11	1-1/4"	Ell, 90°, Compression, Bare, Anode Connector, With Two (2) SDR-11 Lock Stiffeners
	90-PW	2"	Ell, 90°, Compression, Bare, Anode Connector, With Two (2) SDR-11 Lock Stiffeners
	60-CP-101	1" CTS	Tee, Compression, Bare, Anode Connector, With Three (3) 0.099" Lock Stiffeners
	62-PW-10	1-1/4"	Tee, Compression, Bare, Anode Connector, With Three (3) SDR-10 Lock Stiffeners
	62-PW-11	1-1/4"	Tee, Compression, Bare, Anode Connector, With Three (3) SDR-11 Lock Stiffeners
	64-PW (62-PW)	2"	Tee, Compression, Bare, Anode Connector, With Three (3) SDR-11 Lock Stiffeners
	1-C-PLL-101	1" CTS	Coupling, Compression, Bare, Anode Connector, With Two (2) 0.099" Lock Stiffeners
	3-PW-10	1-1/4"	Coupling, Compression, Bare, Anode Connector, With Two (2) SDR-10 Lock Stiffeners
	3-PW-11	1-1/4"	Coupling, Compression, Bare, Anode Connector, With Two (2) SDR-11 Lock Stiffeners
	5-PW	2"	Coupling, Compression, Bare, Anode Connector, With Two (2) SDR-11 Lock Stiffeners
	402-PW-10	1-1/4" X 1" CTS	Coupling, Reducing, Compression, Bare, Anode Connector, With One (1) 1-1/4" SDR-10 and One (1) 1" CTS 0.099" Lock Stiffener
	402-PW-11	1-1/4" X 1" CTS	Coupling, Reducing, Compression, Bare, Anode Connector, With One (1) 1-1/4" SDR-11 and One (1) 1" CTS 0.099" Lock Stiffener
	420-PW-10	2" X 1-1/4"	Coupling, Reducing, Compression, Bare, Anode Connector, With One (1) 2" SDR-11 and One (1) 1-1/4" SDR-10 Lock Stiffener
	420-PW-11	2" X 1-1/4"	Coupling, Reducing, Compression, Bare, Anode Connector, With One (1) 2" SDR-11 and One (1) 1-1/4" SDR-11 Lock Stiffener
	Swagelok Co.	B-1010-6	5/8"
B-1010-3		5/8"	Tee, Brass
B-1010-9		5/8"	Ell, 90°, Brass

Note: Use insert stiffener for 5/8" OD (1/2" CTS) X 0.090" wall plastic pipe.

Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

The following Perfection fittings are molded with PE2406 resin (yellow) and are ONLY used with medium density piping.

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Wall or SDR</u>	<u>Description</u>
Perfection*	50034	1/2" CTS	0.090"	Stab coupling
	50099	1" CTS	0.099"/0.102"	Stab coupling
	50035	1-1/4" IPS	10	Stab coupling
	50036	1-1/4" IPS	11	Stab coupling
	50300	2" IPS	11	Stab coupling
	50109	1/2" CTS X 1" CTS	0.090" X 0.099"/0.102"	Reducing stab coupling
	50620	1" IPS X 1/2" CTS	11 X 0.090"	Reducing stab coupling
	50624	1" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50133	1-1/4" IPS X 1" CTS	10 X 0.099"/0.102"	Reducing stab coupling
	50131	1-1/4" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50335	1-1/4" IPS X 1-1/4" IPS	11 X 10	Reducing stab coupling
	50856	2" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50333	2" IPS X 1-1/4" IPS	11 X 10	Reducing stab coupling
	50334	2" IPS X 1-1/4" IPS	11 X 11	Reducing stab coupling
	50208	1/2" CTS	0.090"	Stab ell
	50205	1" CTS	0.099"/0.102"	Stab ell
	50325	1-1/4" IPS	10	Stab ell
	50326	1-1/4" IPS	11	Stab ell
	50309	2" IPS	11	Stab ell
	50220	1/2" CTS X 1" CTS	0.090" X 0.099"/0.102"	Reducing stab ell
	50200	1/2" CTS	0.090"	Stab tee
	50204	1" CTS	0.099"/0.102"	Stab tee
	50327	1-1/4" IPS	10	Stab tee
	50322	1-1/4" IPS	11	Stab tee
	50310	2" IPS	11	Stab tee
	50336	1-1/4" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab tee
	50328	1-1/4" IPS X 1" CTS	10 X 0.099"/0.102"	Reducing stab tee
	50348	2" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab tee
	51323	2" IPS X 1-1/4" IPS	11 X 10	Reducing stab tee
	51347	2" IPS X 1-1/4" IPS	11 X 11	Reducing stab tee
	50012	1/2" CTS	0.090"	Stab blind end caps
	50008	1" CTS	0.099"/0.102"	Stab blind end caps
	50024	1-1/4" IPS	10	Stab blind end caps
	50025	1-1/4" IPS	11	Stab blind end caps
	50306	2" IPS	11	Stab blind end caps

* Special tools are required for assembly of these products.

Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

The following Perfection mechanical fittings are molded with PE4710/PE100 resin (black) and are used with high-density PE3408/3608 (black) piping, and may also be used with medium-density PE2406/2708 (yellow) piping. The Perfection fittings are PE4710 plastic, and can be used with both and (black) pipe.

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Wall or SDR</u>	<u>Description</u>
Perfection*	50100	1/2" CTS	0.090"	Stab coupling
	50103	1" CTS	0.099"/0.102"	Stab coupling
	50035010	1-1/4" IPS	10	Stab coupling
	50031	1-1/4" IPS	11	Stab coupling
	50314	2" IPS	11	Stab coupling
	50149	1/2" CTS X 1" CTS	0.090" X 0.099"/0.102"	Reducing stab coupling
	50641	1" IPS X 1/2" CTS	11 X 0.090"	Reducing stab coupling
	50623	1" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50192	1-1/4" IPS X 1" CTS	10 X 0.099"/0.102"	Reducing stab coupling
	50194	1-1/4" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50335100	1-1/4" IPS X 1-1/4" IPS	11 X 10	Reducing stab coupling
	50312	2" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab coupling
	50333010	2" IPS X 1-1/4" IPS	11 X 10	Reducing stab coupling
	50334100	2" IPS X 1-1/4" IPS	11 X 11	Reducing stab coupling
	50294	1/2" CTS	0.090"	Stab ell
	51333	1" CTS	0.099"/0.102"	Stab ell
	50325010	1-1/4" IPS	10	Stab ell
	50988	1-1/4" IPS	11	Stab ell
	50315	2" IPS	11	Stab ell
	50223	1/2" CTS X 1" CTS	0.090" X 0.099"/0.102"	Reducing stab ell
	50199	1/2" CTS	0.090"	Stab tee
	50292	1" CTS	0.099"/0.102"	Stab tee
	50327010	1-1/4" IPS	10	Stab tee
	50989	1-1/4" IPS	11	Stab tee
	50316	2" IPS	11	Stab tee
	50336100	1-1/4" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab tee
	50328100	1-1/4" IPS X 1" CTS	10 X 0.099"/0.102"	Reducing stab tee
	50348100	2" IPS X 1" CTS	11 X 0.099"/0.102"	Reducing stab tee
	51323100	2" IPS X 1-1/4" IPS	11 X 10	Reducing stab tee
	51285	2" IPS X 1-1/4" IPS	11 X 11	Reducing stab tee
	50015	1/2" CTS	0.090"	Stab blind end caps
	50048	1" CTS	0.099"/0.102"	Stab blind end caps
	50024100	1-1/4" IPS	10	Stab blind end caps
	50028	1-1/4" IPS	11	Stab blind end caps
	50317	2" IPS	11	Stab blind end caps

* Special tools are required for assembly of these products.

NOTE: The same 1" CTS fitting in PE4710 can be used for both 0.099" wall (yellow) and 0.101" wall (black) pipe.

MATERIALS FOR CUSTOMER SERVICE LINES - CDC

Section Number 3

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Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>	<u>Size</u>
R. W. Lyall Co.*	LC010B-DER	Coupling	1/2" CTS (0.090) Wall
	LC030D-DER	Coupling	1" CTS (0.099) Wall
	LC080Y-DESR	Coupling	1-1/4" IPS (SDR-11)
	LC080X-DESR	Coupling	1-1/4" IPS (SDR-10)
	LC200Y-DESR	Coupling	2" IPS (SDR-11)
	LC080Y-DER	Repair Coupling	1-1/4" IPS (SDR-11)
	LC080X-DER	Repair Coupling	1-1/4" IPS (SDR-10)
	LC200Y-DER	Repair Coupling	2" IPS (SDR-11)
	LC010B-ELR	Elbow	1/2" CTS (0.090) Wall
	LC030D-ELR	Elbow	1" CTS (0.099) Wall
	LC080Y-ELR	Elbow	1-1/4" IPS (SDR-11)
	LC080X-ELR	Elbow	1-1/4" IPS (SDR-10)
	LC200Y-ELR	Elbow	2" IPS (SDR-11)
	LC030D-3TR	Tee	1" CTS (0.099)
	LC080Y-3TR	Tee	1-1/4" (SDR-11)
	LC080X-3TR	Tee	1-1/4" (SDR-10)
	LC200Y-3TR	Tee	2" IPS (SDR-11)
	LC030D010B-RR	Reducing Coupling	1" CTS (0.099) X 1/2" CTS (0.099)
	LC070Y030D-RR	Reducing Coupling	1" IPS (SDR-11) X 1" CTS (0.099)
	LC080Y030C-RR	Reducing Coupling	1-1/4" IPS (SDR-11) X 1" CTS (0.099)
	LC080X030C-RR	Reducing Coupling	1-1/4" IPS (SDR-10) X 1" CTS (0.099)
	LC200Y080Y-RR	Reducing Coupling	2" IPS (SDR-11) X 1-1/4" IPS (SDR-11)
	LC200Y030C-RR	Reducing Coupling	2" IPS (SDR-11) X 1" CTS (0.099)
	LC080Y080Y030C	Reducing Tee	1-1/4" IPS (SDR-11) X 1" CTS (0.099)
	LC080X080X030C	Reducing Tee	1-1/4" IPS (SDR-10) X 1" CTS (0.099)
	LC200Y200Y080Y	Reducing Tee	2" IPS (SDR-11) X 1-1/4" IPS (SDR-11)
	LC200Y200Y030C	Reducing Tee	2" IPS (SDR-11) X 1" CTS (0.099)
	LC010B-ECR	End Cap	1/2" CTS (0.090)
	LC030D-ECR	End Cap	1" CTS (0.099)
	LC070Y-ECR	End Cap	1" IPS (SDR-11)
	LC080Y-ECR	End Cap	1-1/4" IPS (SDR-11)
	LC080X-ECR	End Cap	1-1/4" IPS (SDR-10)
LC200Y-ECR	End Cap	2" IPS (SDR-11)	

* Special tools are required for assembly of these products.

Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
USPoly	81000006330	1/2" CTS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.090" Wall Tubing
	810000011334	1" CTS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for 0.099" Wall Tubing
	810000016650	1-1/4" IPS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for SDR-11 Pipe
	810000016655	1-1/4" IPS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for SDR-10 Pipe
	810000023872	2" IPS	Coupling, Plastic Body, Compression Nut Ends, With Integral Stiffeners for SDR-11 Pipe
Met Fit *	600063063012	1/2" CTS	1/2" CTS X 0.090" Coupling
	605063000012	1/2" CTS	1/2" CTS X 0.090" End Cap
	602063063012	1/2" CTS	1/2" CTS X 0.090" Ell, 90°
	603063063012	1/2" CTS	1/2" CTS X 0.090" Tee
	600113113002	1" CTS	1" CTS X 0.099" Coupling
	605113000002	1" CTS	1" CTS X 0.099" End Cap
	602113113092	1" CTS	1" CTS X 0.099" Ell
	603113113092	1" CTS	1" CTS X 0.099" Tee
604113063012	1" CTS X 1/2" CTS	1" CTS 0.099" X 1/2" CTS 0.090" Reducer	

* These fittings are manufactured by USPoly and they require special tooling for assembly. Use 1/2" CTS Hand Tool #727001. 1" CTS can be assembled with #727001 Tool and Adaptor Set #727001.

MATERIALS FOR CUSTOMER SERVICE LINES - CDC

Section Number 3

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Mechanical Fittings

3.1 Plastic Pipe to Plastic Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Wall or SDR</u>	<u>Description</u>
Continental Industries (Con-Stab ID only)	3259-52-1004-00	1/2" CTS	0.090"	Coupling
	3259-52-1008-00	1" CTS	0.099/0.101"	Coupling
	3259-52-1014-00	1" IPS	11	Coupling
	3259-52-1015-00	1-1/4" IPS	10	Coupling
	3259-52-1015-AA	1-1/4" IPS	11	Coupling
	3259-52-1017-00	2" IPS	11	Coupling
	3259-54-0804-00	1/2" CTS X 1" CTS	0.090" X 0.099"/0.101"	Reducing Coupling
	3259-54-1404-00	1" IPS X 1/2" CTS	11 X 0.090"	Reducing Coupling
	3259-54-1408-00	1" IPS X 1" CTS	11 X 0.099"/0.101"	Reducing Coupling
	3259-54-1508-00	1-1/4" IPS X 1" CTS	10 X 0.099"/0.101"	Reducing Coupling
	3259-54-1508-A0	1-1/4" IPS X 1" CTS	11 X 0.099"/0.101"	Reducing Coupling
	3259-54-1514-00	1-1/4" IPS X 1" IPS	10 X 11	Reducing Coupling
	3259-54-1708-00	2" IPS X 1" CTS	11 X 0.099"/0.101"	Reducing Coupling
	3259-54-1715-00	2" IPS X 1-1/4" IPS	11 X 10	Reducing Coupling
	3259-51-1004-00	1/2" CTS	0.090"	EII
	3259-51-1008-00	1" CTS	0.099/0.101"	EII
	3259-51-1014-00	1" IPS	11	EII
	3259-51-1015-00	1-1/4" IPS	10	EII
	3259-51-1017-00	2" IPS	11	EII
	3259-50-1004-00	1/2" CTS	0.090"	3-Way Tee
	3259-50-1008-00	1" CTS	0.099/0.101"	3-Way Tee
	3259-50-1014-00	1" IPS	11	3-Way Tee
	3259-50-1015-00	1-1/4" IPS	10	3-Way Tee
	3259-50-1017-00	2" IPS	11	3-Way Tee
	3259-49-0408-00	1/2" CTS X 1" CTS	0.090" X 0.099/0.101"	Reducing Tee
	3259-49-0804-00	1" CTS X 1/2" CTS	0.099/0.101" X 0.090"	Reducing Tee
	3259-49-1508-00	1-1/4" IPS X 1" CTS	10 X 0.099/0.101"	Reducing Tee
3259-49-1508-A0	1-1/4" IPS X 1" CTS	11 X 0.099/0.101"	Reducing Tee	
3259-49-1708-00	2" IPS X 1" CTS	11 X 0.099/0.101"	Reducing Tee	
3259-49-1715-00	2" IPS X 1-1/4" IPS	11 X 10	Reducing Tee	
3259-57-1004-00	1/2" CTS	0.090"	Cap-n-Go	
3259-57-1008-00	1" CTS	0.099/0.101"	Cap-n-Go	
3259-57-1015-00	1-1/4" IPS	10	Cap-n-Go	
3259-57-1015-AA	1-1/4" IPS	11	Cap-n-Go	
3259-57-1017-00	2" IPS	11	Cap-n-Go	
3259-53-1004-00	1/2" CTS	0.090"	End Cap	
3259-53-1008-00	1" CTS	0.099/0.101"	End Cap	
3259-53-1015-00	1-1/4" IPS	10	End Cap	
3259-53-1015-AA	1-1/4" IPS	11	End Cap	
3259-53-1017-00	2" IPS	11	End Cap	
0459-56-1200-00	1/2" CTS	0.090" X 12" long	Repair Coupling	
0859-56-1200-00	1" CTS	0.099/0.101" X 12" long	Repair Coupling	
3238-14-4415-00	1-1/4" IPS	10 X 14" long	Repair Coupling	
3238-14-4415-AA	1-1/4" IPS	11 X 14" long	Repair Coupling	
3238-14-4417-00	2" IPS	11 X 14" long	Repair Coupling	

Mechanical Fittings

3.2 Steel Pipe to Plastic Pipe

<u>Manufacturer</u>	<u>Part Number</u>	<u>Size</u>		<u>Description</u>
		<u>Steel Pipe</u>	<u>Plastic Pipe</u>	
Dresser	0090-1734-536	1-1/4"	X 1-1/4"	Coupling, Compression, Lock Nut Steel End, Plasti-Lok, *Coated, with SDR-10 Insert Stiffener Other End
	0090-1729-536	1-1/4"	X 1-1/4"	Coupling, Compression, Lock Nut Steel End, Plasti-Lok, *Coated, with SDR-11 Insert Stiffener Other End
	0090-1731-536	2"	X 2"	Coupling, Compression, Lock Nut Steel End, Plasti-Lok, *Coated, with SDR-11 Insert Stiffener Other End
	* E-Coat Primer Coated.			
Normac	406-A-LA-101	1"	X 1" CTS	Coupling, Reducing, Compression, Bare, Lock Ends, With One 1" CTS 0.099" Integral Stiffener, Bare
	87-BA-LA-101	1-1/4"	X 1" CTS	Ell, Reducing, 90°, Compression, Lock Ends, With One 1" CTS 0.099" Integral Stiffener, Bare
	79-DC-LA-090	1"	X 1/2" CTS	Ell, Reducing, 90°, Compression, Lock Ends, With One 1/2" CTS 0.090" Integral Stiffener, Bare

Note: Other Normac sizes for steel-to-plastic connections over 1" can be found under the listing for Normac plastic-to-plastic fittings. To convert one end for use on steel pipe, merely remove the stiffener and lock ring from one end.

Mechanical Fittings

3.3 Steel Pipe to Steel Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
Normac	2-SLBT	1"	Coupling, Compression, Bare
	407-SLBT	1-1/4" X 1"	Coupling, Reducing, Compression, Bare
	79-SLBT	1"	Ell, 90°, Compression, Bare
	87-B-SLBT	1-1/4" X 1"	Ell, 90°, Reducing, Compression, Bare
<p>Note: Other Normac sizes for steel-to-steel connections over 1" can be found under the listing for Normac plastic-to-plastic fittings. To convert fittings for use on steel pipe, merely remove the stiffeners and lock rings.</p>			
Dresser	0090-0001-086	3/4"	Coupling, Style 90, Compression, Lock Type, *Coated
	0090-0002-086	1"	Coupling, Style 90, Compression, Lock Type, *Coated
	0090-0003-086	1-1/4"	Coupling, Style 90, Compression, Lock Type, *Coated
	0090-0580-086	1" X 3/4"	Coupling, Reducing, Style 90, Compression, Lock Type, *Coated
	0090-0581-086	1-1/4" X 3/4"	Coupling, Reducing, Style 90, Compression, Lock Type, *Coated
	0090-0582-086	1-1/4" X 1"	Coupling, Reducing, Style 90, Compression, Lock Type, *Coated
	0090-0241-086	3/4"	Ell, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0242-086	1"	Ell, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0243-086	1-1/4"	Ell, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0270-086	3/4"	Ell, Street, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0271-086	1"	Ell, Street, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0272-086	1-1/4"	Ell, Street, 90°, Style 90, Compression, Lock Type, *Coated
	0090-0710-086	3/4"	Tee, Style 90, Compression, Lock Type, *Coated
	0090-0711-086	1"	Tee, Style 90, Compression, Lock Type, *Coated
	0090-0712-086	1-1/4"	Tee, Style 90, Compression, Lock Type, *Coated

* E-Coat Primer Coated.

Mechanical Fittings

3.4 Plastic Pipe to Copper Pipe

<u>Manufacturer</u>	<u>Part Number</u>	<u>Size</u>		<u>Description</u>
		<u>Steel Pipe</u>	<u>Plastic Pipe</u>	
Swagelok Co.	B-1010-6	5/8" X 5/8"		Coupling, Brass
	B-1010-6-6	5/8" X 3/8"		Coupling, Reducing, Brass
	B-1010-3-10-6	5/8" X 5/8" X 3/8"		Tee, Reducing, Brass
R. W. Lyall				
*Lycofit	LC375010B-GC	5/8" (1/2" CTS) X 3/8"		Coupling, Reducing
* Special tools required to install.				
Note: Use insert stiffener for 5/8" (1/2" CTS) 0.090" wall plastic pipe.				
USPoly	250573037013	3/8" X 1/2" CTS (0.090)		Brass Coupling Copper X Plastic

Mechanical Fittings

3.5 Bolted Couplings Steel/Steel; Steel/Plastic; Plastic/Plastic

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
Smith Blair-CSI	U-18A7-UMG	1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.
	EZ-18A7-UMG	1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.
	U-218A7-UMG	2" X 1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.
	EZ-218A7-UMG	2" X 1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.
	U-28A7-UMG	2"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.
	EZ-28A7-UMG	2"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Order stiffeners separately. See Part Numbers below.

Stiffeners for use with Smith Blair-CSI Products:

C-1286-8	1-1/4" IPS SDR-10
C-1312-8	1-1/4" IPS SDR-11
C-1900-8	2" IPS SDR-11

Mechanical Fittings

3.5 Bolted Couplings Steel/Steel; Steel/Plastic; Plastic/Plastic

<u>Manufacturer</u>		<u>Part No.</u>	<u>Size</u>	<u>Description</u>
Dresser	Steel/Steel	0711-0001-201	1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector, with Stiffener(s) for use with SDR-10 plastic pipe.
	Steel/Plastic	0711-0031-201		
	Plastic/Plastic	0711-0034-201		
	Steel/Steel	0711-0001-201	1-1/4"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector, with Stiffener(s) for use with SDR-11 plastic pipe.
	Steel/Plastic	0711-0032-201		
	Plastic/Plastic	0711-0035-201		
	Steel/Steel	0711-0002-201	2"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector, with Stiffener(s) for 2" IPS SDR-11 plastic pipe.
	Steel/Plastic	0711-0033-201		
	Plastic/Plastic	0711-0036-201		
		0711-0026-201	1-1/4" X 2"	Coupling, Universal, Bolted, Lock Style, 7" Middle Ring, Conductive Gaskets, Epoxy Coated, with Anode Connector. Stiffeners separate, use Part Number below.

Stiffeners for Dresser Couplings:

2700-0104-006	1-1/4" IPS SDR-10	Stiffener, Steel, 7" long
2700-0105-001	1-1/4" IPS SDR-11	Stiffener, Steel, 7" long
2700-0109-001	2" IPS SDR-11	Stiffener, Steel, 7" long

Mechanical Fittings

3.6 Bolt-on Saddle Tees (Plastic)

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
R.W. Lyall Co.	LC080030D-TTF	1" CTS X 1-1/4" IPS	Lycofit Mechanical Tapping Tee
	LC200030D-TTF	1" CTS X 2" IPS	Lycofit Mechanical Tapping Tee
	LC080010B-TTF	1/2" CTS X 1-1/4" IPS	Lycofit Mechanical Tapping Tee
	LC200010B-TTF	1/2" CTS X 2" IPS	Lycofit Mechanical Tapping Tee
Note: Lycofit Fittings requires special tooling for installation.			
Dresser	0408-0004-002	1/2" (0.090) X 2" IPS	Outlet, Service Tee, Plastic, Bolt On, Style 408
	0408-0006-002	1" CTS (0.099) X 2" IPS	Outlet, Service Tee, Plastic, Bolt On, Style 408

Meter Settings

4.1 Single Prefabricated Setting

Prefabricated meter settings must be made to Columbia Gas' design and the manufacturer identified on the meter bar.

Single Domestic Meter Settings

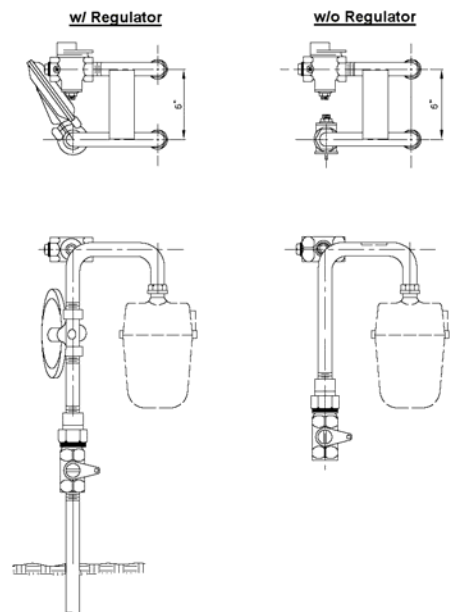
All domestic meter settings are 1" with 20 LT connections for domestic Class 250 meters.

Columbia Part No.	Outlet Connection	Description
<u>Greater than 1 psig inlet pressure – with regulator</u>		
Union		
44-84-250		Meter set, 3/16" orifice for 60 psig inlet max., 7" w.c. outlet pressure (S-1310)
44-84-250L		Meter set, 3/16" orifice for 60 psig inlet max., 7" w.c. outlet pressure, with insulated tailpiece on inlet meter stop (S-1310)
44-84-252		Meter set, 3/16" orifice for 60 psig inlet max., 2# outlet pressure (S-1310)
44-84-253		Meter set, 1/8" orifice for 99 psig inlet max., 7" w.c. outlet pressure (S-1310)
44-84-257		Meter set, 1/8" orifice for 99 psig inlet max., 2# outlet pressure (S-1310)
Stop w/ insulated union		
44-84-256		Meter set, 3/16" orifice for 60 psig inlet max., 7" w.c. outlet pressure (S-1311)
44-84-254		Meter set, 3/16" orifice for 60 psig inlet max., 2# outlet pressure (S-1311)
44-84-270		Meter set, 1/8" orifice for 99 psig inlet max., 7" w.c. outlet pressure (S-1311)
44-84-275		Meter set, 1/8" orifice for 99 psig inlet max., 2# outlet pressure (S-1311)

Less than 1 psig inlet pressure – without regulator

Union		
44-84-248		Meter set, less regulator (S-1360)
44-84-249		Meter set, less regulator, extended length for uprating (S-1360U)
Stop w/ insulated union		
44-84-246		Meter set, less regulator (S-1361)
44-84-263		Meter set, less regulator, extended length for uprating (S-1361U)

Approved Manufacturers	Part No.
Central Plastics	Same as Columbia Part No.
Columbia Fabrication Shop	Same as Columbia Part No.
Mechanical Specialties	Same as Columbia Part No.
Reliable Mfg. Co., Inc.	Same as Columbia Part No.
UPSCO, Inc.	U70540 (44-84-246) U70535 (44-84-248) U70538 (44-84-249) U70536 (44-84-250) U70539 (44-84-250L) U70537 (44-84-252) U70542 (44-84-253) U70546 (44-84-254) U70541 (44-84-256) U70547 (44-84-257) U70545 (44-84-263) U70543 (44-84-270) U70544 (44-84-275)



Meter Settings

4.1 Single Prefabricated Setting

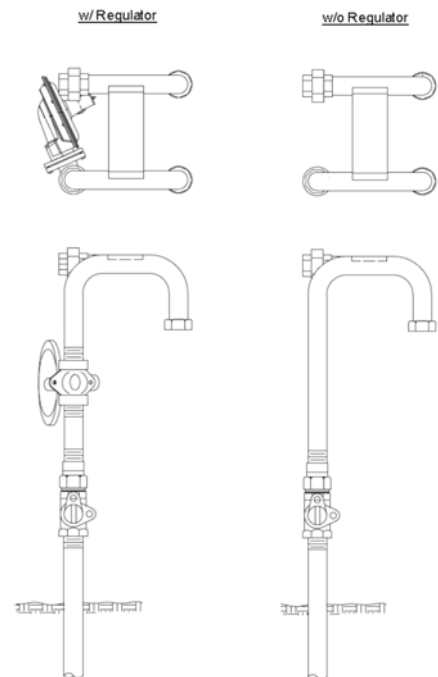
Prefabricated meter settings must be made to Columbia Gas' design and the manufacturer identified on the meter bar.

Large Volume (LV) Meter Settings

All LV meter settings are 1 1/4" with 30 LT connections for Class 425/630 meters.

Columbia Part No.	Outlet Connection	Description
<u>Greater than 1 psig inlet pressure – with regulator</u>		
	Union	
44-84-600		Meter set, 5/16" orifice for 60 psig inlet max., 7" w.c. outlet pressure (S-1390)
	Stop w/ insulated union	
44-84-601		Meter set, 5/16" orifice for 60 psig inlet max., 7" w.c. outlet pressure (S-1390)
<u>Less than 1 psig inlet pressure – without regulator</u>		
	Union	
44-84-602		Meter set, less regulator (S-1391)
	Stop w/ insulated union	
44-84-603		Meter set, less regulator (S-1391)

Approved Manufacturers	Part No.
Central Plastics	Same as Columbia Part No.
Mechanical Specialties	Same as Columbia Part No.



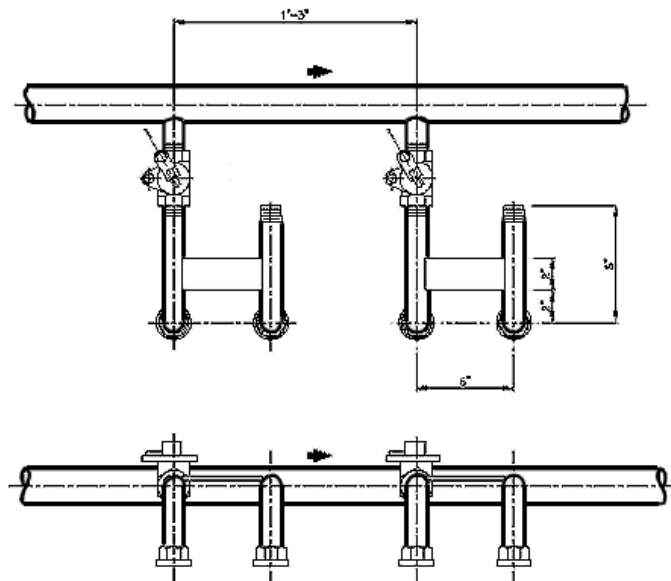
Meter Settings

4.2 Manifold Prefabricated Setting

Prefabricated meter settings must be made to Columbia Gas' design and the manufacturer identified on the meter bar.

<u>Manifold Domestic Meter Settings</u>	<u>Part No.</u>	<u>Size</u>	<u>Description</u>
	44-84-012	1-1/4"	2-meter manifold
	44-84-014	1-1/4"	3-meter manifold
	44-84-016	1-1/4"	4-meter manifold

<u>Approved Manufacturers</u>	<u>Part No.</u>
Columbia Fabrication Shop (Columbia Gas of Ohio)	44-84-012
	44-84-014
	44-84-016
Central Plastics	44-84-012
	44-84-014
	44-84-016
UPSCO, Inc.	U70539 (44-84-012)
	U70540 (44-84-014)
	U70541 (44-84-016)



Meter Settings

4.3 Cast Meter Bars

Cast meter bars must comply with the company's specifications.

The manufacturers and models listed are those commonly used. Other manufacturers may be substituted if the specifications are met.

Specification: Meter bar, pre-cast, side inlet and top outlet, insulated union on outlet.



<u>Manufacturer</u>	<u>Part #</u>	<u>Size</u>	<u>Center-to-Center</u>
Mueller	701115	1"	6-1/2"
Mueller	701127	1-1/4"	7"
National Meter	332-14040-333	1"	6-1/2"
Richards Mfg	MBST-1-1-1-INS	1"	6-1/2"
Richards Mfg	MBST7-1-1/4-FI	1-1/4"	7"

MATERIALS FOR CUSTOMER SERVICE LINES - CDC

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Setting Valves

5.1 Meter Stop, Insulating Union Outlet, 1/8" Test Port, Lockwing Head

<u>Manufacturer</u>	<u>Size</u>	<u>Manufacturer's Designation</u>	<u>Manufacturer's Rated Working Pressure (psig)</u>	<u>Tailpiece Outlet Connection*</u>
Dresser Mfg.	3/4"	0275-0054-002	175	FIPS
	1"	0275-0056-002	175	FIPS
	1-1/4"	0275-0058-002	175	FIPS
A. Y. McDonald Mfg. Co.	3/4"	6276-BC	175	FIPS
	1"	6276-BC	175	FIPS
	1-1/4"	6276-BC	175	FIPS
Mueller	3/4"	H11179-171330	175	FIPS
	1"	H11179-171330	175	FIPS
	1-1/4"	H11179-171330	175	FIPS

* MIPS approved, but not listed.

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Setting Valves

5.2 Meter Stop, No Union End, 1/8" Test Port, Lockwing Head (except as noted)

<u>Manufacturer</u>	<u>Size</u>	<u>Manufacturer's Designation</u>	<u>Rate Working Pressure (psig)</u>	<u>Manufacturers Connection</u>	<u>Additional Comments</u>
Mueller	3/4"	H11175-171330	175	FIPS	
	1"	H11175-171330	175	FIPS	
Dresser Mfg. Div.	3/4"	0275-0026-002	175	FIPS	
	1"	0275-0028-002	175	FIPS	
	1-1/4"	0275-0029-002	175	FIPS	
	1-1/2"	0175-0004-001	175	FIPS *	No test port, no lock wing head
	2"	0175-0005-009	175	FIPS *	No lock wing head
A. Y. McDonald Mfg. Co.	3/4"	560-BC	175	FIPS	
	1"	560-BC	175	FIPS	
	1-1/4"	560-BC	175	FIPS	
	1-1/2"	560-BC	175	FIPS	
	2"	560-BC	175	FIPS	
Nordstrom Valves, Inc.	2"	Fig. No. 142	200	FIPS *	No test port, no lock wing head

* Locking device available.
 Meter valves with male outlet connection are approved, but not listed.

Setting Valves

5.3 Butterfly Valves

Butterfly valves installed in the company's system shall be rated for "dead-end" service.

<u>Manufacturer</u>	<u>Size</u>	<u>Manufacturer's Designation</u>	<u>Rate Working Pressure (psig)</u>	<u>Additional Comments</u>
Nibco	2"	LD-3110-5	250#	Ductile-iron threaded-lugged body, buna-N seats, with gear actuator
	3"	LD-3110-5	250#	Ductile-iron threaded-lugged body, buna-N seats, with gear actuator
	4"	LD-3110-5	250#	Ductile-iron threaded-lugged body, buna-N seats, with gear actuator
	6"	LD-3110-5	250#	Ductile-iron threaded-lugged body, buna-N seats, with gear actuator
	8"	LD-3110-5	250#	Ductile-iron threaded-lugged body, buna-N seats, with gear actuator

Sleeves for Masonry Wall Entrances

6.1 Compression Nut Wall Sleeve Seals

Contains nuts and gaskets only. Threaded *pipe (sleeve) not included.

<u>Manufacturer</u>	<u>Part No.</u>	<u>Size</u> (Steel Carrier Pipe X Sleeve*)
Dresser (Style 201)	0201-0001-002	3/4" X 1-1/4"
	0201-0002-002	1" X 1-1/2"
	0201-0003-002	1-1/4" X 2"
Telsco (Series 400)	400-152	1" X 1-1/2"
	400-202	1-1/4" X 2"
	400-251	2" X 2-1/2"
Normac	101	1/2" X 1"
	102	3/4" X 1-1/4"
	103	1" X 1-1/2"
	104B	1-1/4" X 2"

* Sleeve may be plastic or steel.

Protective Coating Systems and Cathodic Protection Materials

7.1 Approved Mill Applied Pipe Coatings

<u>Coating Type</u>	<u>Manufacturer</u>	<u>Designation</u>	<u>Qualified Applicators</u>
Polyethylene Coating			
	Union Carbide	ENTEC Extruded X-TEC 1	Bredero Price Co. Dura-Bond Coating, Inc.
Epoxy Type Coating			
	Lilly	Lilly Pipeclad #2000	Consolidated Dura-Bond Coating, Inc.
	Minnesota Mining & Mfg. Co. (3M)	Scotchkote 206N, Fast, Slow & STD	L. B. Foster Co. Midwest Piping Coating, Inc. Bredero Price Co.
	Denso North America	Protal 7125 Protal 7200 Protal ST	Dura-Bond Coating, Inc.

Protective Coating Systems and Cathodic Protection Materials

7.2 Tape Coatings

Cold applied laminated tapes may be used for this purpose. The use of tape as an entire pipe coating system is discouraged.

APPROVED COATINGS FOR FITTINGS AND JOINTS, AND REPAIR OF DAMAGED PIPE COATINGS

Manufacturer

Designation

Primer

COLD APPLIED LAMINATED TAPES

Tapecoat Co.

Tapecoat H-30, H-35

TC Omniprime

Dura-Bond Coating Co.

Polyken #936-30

Polyken 1027

Protective Coating Systems and Cathodic Protection Materials

7.3 Coatings for Valves and Fittings

The use of mastics is no longer allowed by the Gas Company.

FACTORY APPLIED COATINGS FOR VALVES AND FITTINGS

<u>Manufacturer</u>	<u>Designation</u>
Robroy Industries	Plasti-Bond
Dresser Industries	Al-Clad 201 System Plastisol E-Coat
3M Co.	Scotchkote #306
Porter Paint Co.	Intertuf 708
Royston Laboratories	Roskote 201

Protective Coating Systems and Cathodic Protection Materials

7.4 Sacrificial Anodes

MAGNESIUM ANODES

Magnesium anodes must comply with the composition specifications listed in the Columbia Gas Distribution Companies, Index of Material Standards, Section 2, Magnesium Anodes. Manufacturers who produce anodes to those specifications are listed below.

Manufacturer

International Metals
Dow Chemical
Magnesium Corporation of America

ZINC ANODES FOR STEEL PRE-BENT RISERS

Zinc anodes attached to prefabricated coated steel risers for service lines must meet the requirements of ASTM B418-67, Type II composition, with an iron content of less than 0.001%. The anode shall be 3/4" X 3/4" X 4-3/4" in size weighing at least 3/4 pound and containing a #14 gage steel wire core of 0.080" diameter which extends a minimum of 2" beyond end of anode. A 3# magnesium anode with the composition specifications listed in the Columbia Gas Distribution Companies "Index of Material Standards", Section 2, Magnesium Anodes, may be used in place of the zinc anode.

The anode shall be strapped to the top portion of the horizontal leg of the riser pipe approximately midway between the inlet end and bend. The strapping shall be non-metallic and of such material and size that it holds the anode firmly in place during shipment and installation and does not markedly shield the output from the anode. The end of the steel wire core shall be attached to the riser pipe by a welding process. The weld connection shall be coated. Manufacturers who produce anodes to this specification are listed below.

Manufacturer

Federated Metals
American Smelting & Refining Co.

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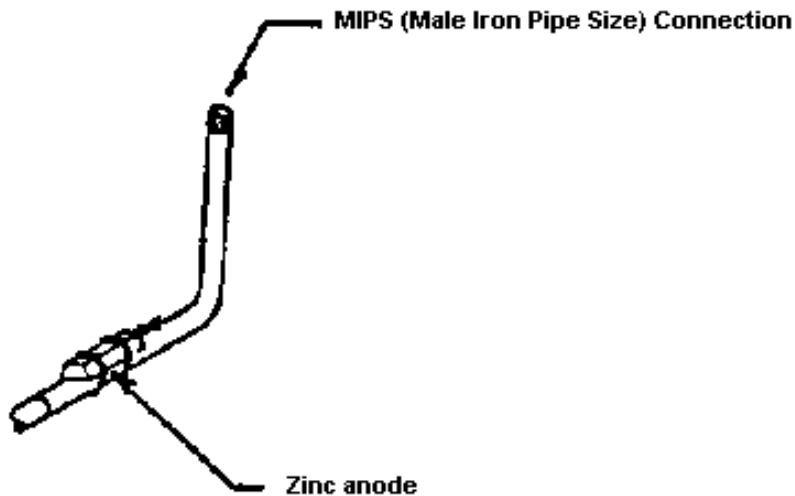
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Risers

8.1 Steel Risers (Pre-bent)*

<u>Manufacturers</u>	<u>Manufacturer's Designation</u>	<u>Nominal Pipe Size & MIPS Connection</u>	<u>Leg Lengths</u>
Continental Industries, Inc.	9951-00-0018-00 (Coated w/Anode)	3/4"	26" Vert. X 31" Hor.
	9951-00-0014-00 (Coated w/Anode)	1"	26" Vert. X 28" Hor.
Perfection Corp.	74071 (Coated w/Anode)	1"	25" Vert. X 30" Hor.
	74075 (Coated w/Anode)	1-1/4"	25" Vert. X 30" Hor.
USPoly (R.W. Lyall)	202382380823 (2020A) (Coated w/Anode)	2"	24" Vert. X 36" Hor.

*For use only with all steel service lines and outdoor appliances.



Risers

8.2 Flexible Risers Less Plastic Carrier Pipe

This style of riser has been discontinued.

Risers

8.3 Flexible and Stub Flex Risers With Plastic Carrier Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
Perfection	71800	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End (Factory-Assembled Version of 71200)
	77735	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	77736	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	77737	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (SDR 10) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	75473010	1/2" CTS (0.090" Wall) X 1" MIPS, Stub-Flex Riser, 19-1/4" Stub X 36" Flex, Grey Epoxy Coated Stub, Double Seal, with 1/2" CTS (0.090" Wall) High-Density Black Plastic Tubing and Perma-Sert Coupling End
	75599	1" CTS X 1" MIPS, Stub-Flex Riser, 16" Stub X 30" Flex, Grey Epoxy Coated Stub, with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing with Perma-Sert Coupling End
	75599010	1" CTS X 1" MIPS, Stub-Flex Riser, 16" Stub X 30" Flex, Grey Epoxy Coated Stub, with 1" CTS (0.101" Wall) High-Density Black Plastic Tubing with Perma-Sert Coupling End
	75420100	1/2" CTS X 1" MIPS, Stub-Flex Riser, 19-1/4" Stub X 36" Flex, Grey Epoxy Coated Stub, with 1/2" CTS (0.090" Wall) Medium-Density Yellow Plastic Tubing and Perma-Sert Coupling End
	77734	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.101" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	77734010	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.101" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Plain End
	77738	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	77738010	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Plain End
	77739	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (SDR 11) High-Density Black Plastic Tubing, Moisture Seal, and Perma-Sert Coupling End
	77739010	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (SDR 11) High-Density Black Plastic Tubing, Moisture Seal, and Plain End
	R.W. Lyall	COLGS070030A
COLGS070030B		1" IPS X 1" CTS (0.099" Wall) 36" Stub-Flex Riser, Medium-Density

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Risers

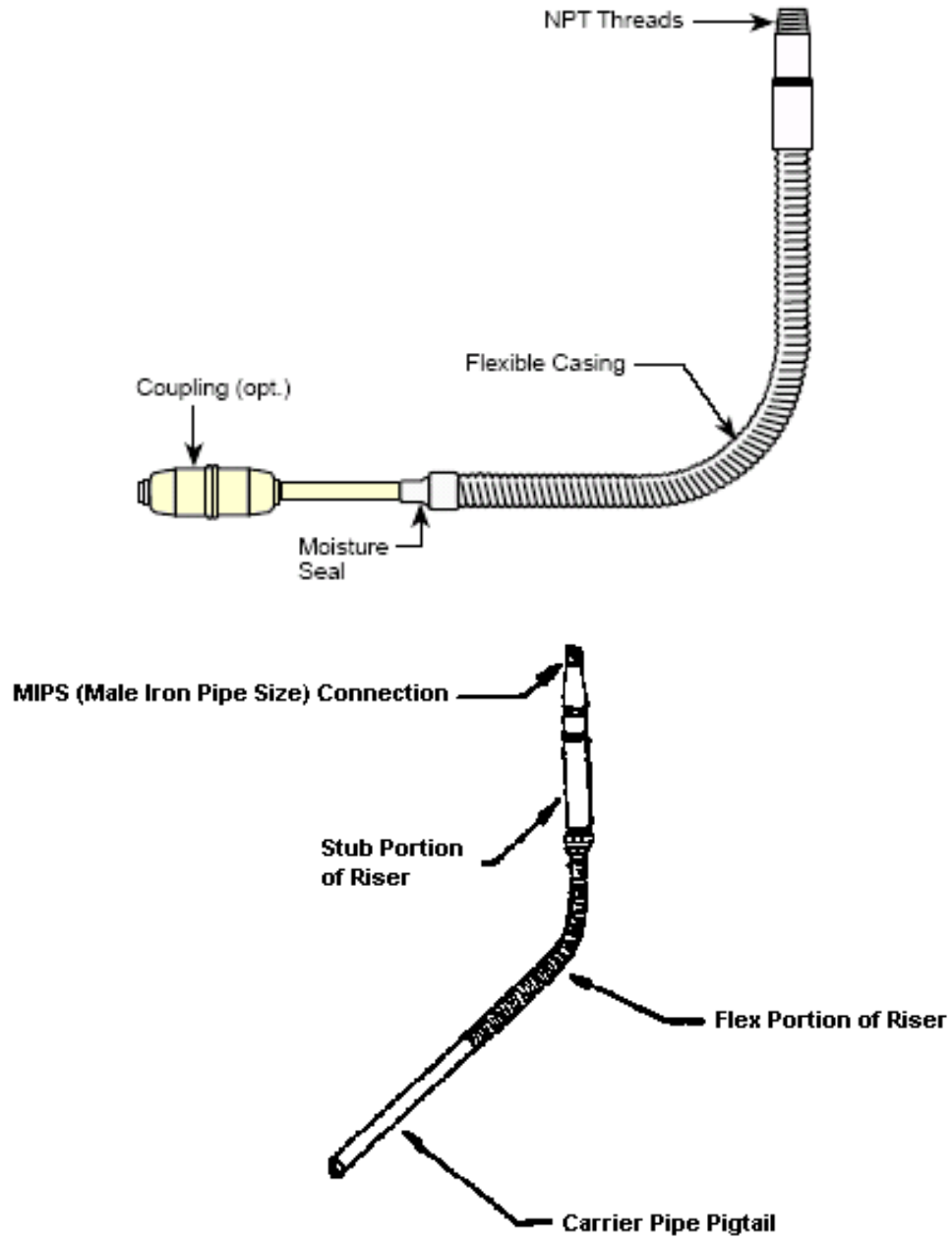
		Yellow Plastic, Shrink Sleeve Applied Over Bushing A1207A, ConStab Coupling (3369-52-1008-00)
	COLGS070010A	1" IPS X 1/2" CTS (0.090" Wall) 36" Stub-Flex Riser, Medium-Density Yellow Plastic, Shrink Sleeve Applied Over Bushing A1207A, 12" Plain End Pigtail
	COLGS070010B	1" IPS X 1/2" CTS (0.090" Wall) 36" Stub-Flex Riser, Medium-Density Yellow Plastic, Shrink Sleeve Applied Over Bushing A1207A, ConStab Coupling (3369-52-1004-00)
	COLGS070030A-01	1" IPS X 1" CTS (0.101" Wall) 36" Stub-Flex Riser, High-Density Black Plastic, Shrink Sleeve Applied Over Bushing A1207A, 12" Plain End Pigtail
	COLGS070030B-01	1" IPS X 1" CTS (0.101" Wall) 36" Stub-Flex Riser, High-Density Black Plastic, Shrink Sleeve Applied Over Bushing A1207A, ConStab Coupling (3369-52-1008-00)
	COLGS070010A-01	1" IPS X 1/2" CTS (0.090" Wall) 36" Stub-Flex Riser, High-Density Black Plastic, Shrink Sleeve Applied Over Bushing A1207A, 12" Plain End Pigtail
	COLGS070010B-01	1" IPS X 1/2" CTS (0.090" Wall) 36" Stub-Flex Riser, High-Density Black Plastic, Shrink Sleeve Applied Over Bushing A1207A, ConStab Coupling (3369-52-1004-00)
Energy Control Systems Inc.	FR-13MTX11BF24-36*	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-13MTX11CS24-36*	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and ConStab Coupling
	FR-13MTX06BF24-36*	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-13MTX06CS24-36*	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and ConStab Coupling
	FR-16MTX16BF24-36*	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-16MTX16CS24-36*	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and ConStab Coupling
	FR-13MTX11BF34-36*	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.101" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-13MTX11CS34-36*	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.101" Wall) High-Density Black Plastic Tubing, Moisture Seal, and ConStab Coupling
	FR-13MTX06BF34-36*	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) High-Density Black Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-13MTX06CS34-36*	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) High-Density Black Plastic Tubing, Moisture Seal, and ConStab Coupling
	FR-16MTX16BF34-36*	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS

Risers

		(SDR11) High-Density Black Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	FR-16MTX16CS34-36*	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (SDR11) High-Density Black Plastic Tubing, Moisture Seal, and ConStab Coupling
Central Plastics	10007262	1-1/4" IPS X 1-1/4" MIPS, 36" Long Flex Riser with 1-1/4" IPS (SDR-10) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	10007263	1" CTS X 1" MIPS, 36" Long Flex Riser with 1" CTS (0.099" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail
	10007264	1/2" CTS X 1" MIPS, 36" Long Flex Riser with 1/2" CTS (0.090" Wall) Medium-Density Yellow Plastic Tubing, Moisture Seal, and Plain-End Pigtail

* Additional numbers/letters appended to this part number indicate bracket options.

Risers



Risers

8.4 Steel Encased Pre-bent Risers Less Plastic Carrier Pipe

This style of riser has been discontinued.

Risers

8.5 Steel Encased Pre-bent Risers With Plastic Carrier Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>	
Perfection	75270	1" CTS (0.099" Wall) X 1" MIPS Pre-bent Steel Riser, 28" Vertical Leg X 27" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, Medium-Density Yellow Plastic, Permasert End	
	75270100	1" CTS (0.101" Wall) X 1" MIPS Pre-bent Steel Riser, 28" Vertical Leg X 27" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, High-Density Black Plastic, Permasert End	
	75313	1" CTS (0.099" Wall) X 1" MIPS Pre-bent Steel Riser, 28" Vertical Leg X 27" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, Medium-Density Yellow Plastic, Plain End	
	75313010	1" CTS (0.101" Wall) X 1" MIPS Pre-bent Steel Riser, 28" Vertical Leg X 27" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, High-Density Black Plastic, Plain End	
	75900	1-1/4" (SDR-10) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 24" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, Medium-Density Yellow Plastic, Plain End	
	75900103	1-1/4" (SDR-11) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 24" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, High-Density Black Plastic, Plain End	
	75901	1-1/4" (SDR-10) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 24" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, Medium-Density Yellow Plastic, Permasert End	
	75901010	1-1/4" (SDR-11) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 24" Horizontal Leg, Grey Epoxy Coating, Single Seal, Moisture Seal, High-Density Black Plastic, Permasert End	
	R.W. Lyall	2413211309A0	1" CTS (0.099" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail
		2413211309A9	1" CTS (0.099" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, ConStab Coupling (3369-52-1008-00)
2413206301A0		1/2" CTS (0.090" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail	
2413206301A9		1/2" CTS (0.090" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, ConStab Coupling (3369-52-1004-00)	
2416616607A0		1-1/4" (SDR-10) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail	
2416616607A9		1-1/4" (SDR-10) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, ConStab Coupling (3369-52-1015-00)	

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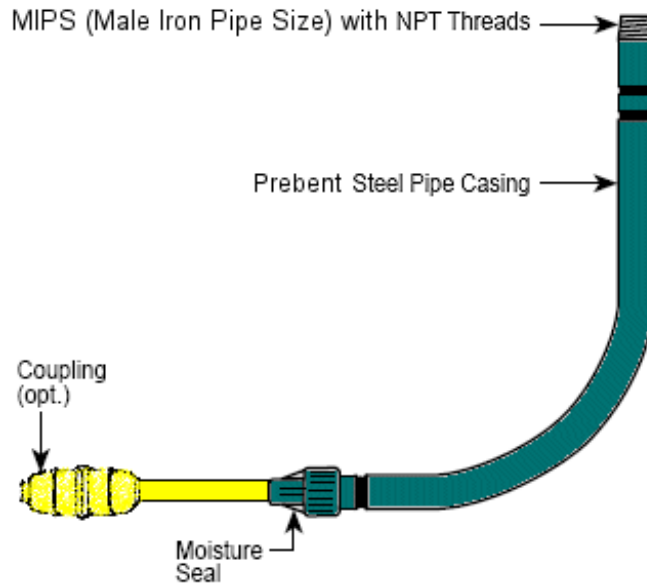
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Risers

	242382380860	2" IPS (SDR-11) X 2" MIPS Pre-bent Steel Riser, 36" Vertical X 36" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail
	242382380869	2" IPS (SDR-11) X 2" MIPS Pre-bent Steel Riser, 36" Vertical X 36" Horizontal, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, ConStab Coupling (3369-52-1017-00)
	2413211369A0	1" CTS (0.101" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail
	2413211369A9	1" CTS (0.101" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, ConStab Coupling (3369-52-1008-00)
	2413206361A0	1/2" CTS (0.090" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail
	2413206361A9	1/2" CTS (0.090" Wall) X 1" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, ConStab Coupling (3369-52-1004-00)
	2416616668A0	1-1/4" (SDR-11) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail
	2416616668A9	1-1/4" (SDR-11) X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical X 30" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, ConStab Coupling (3369-52-1015-AA)
	242382386860	2" IPS (SDR-11) X 2" MIPS Pre-bent Steel Riser, 36" Vertical X 36" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail
	242382386869	2" IPS (SDR-11) X 2" MIPS Pre-bent Steel Riser, 36" Vertical X 36" Horizontal, Epoxy Coating, High-Density Black Plastic, Moisture Seal, ConStab Coupling (3369-52-1017-00)
Energy Control Systems	SR-16MPTX16BF-2406-10	1-1/4" (SDR-10) MDPE X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 30" Horizontal Leg, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail
	SR-2MPTX2BF-2406-11	2" (SDR-11) MDPE X 2" MIPS Pre-bent Steel Riser, 36" Vertical Leg X 36" Horizontal Leg, Epoxy Coating, Medium-Density Yellow Plastic, Moisture Seal, Plain End Pigtail
	SR-16MPTX16BF-3408-11	1-1/4" (SDR-11) HDPE X 1-1/4" MIPS Pre-bent Steel Riser, 30" Vertical Leg X 30" Horizontal Leg, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail
	SR-2MPTX2BF-3408-11	2" (SDR-11) HDPE X 2" MIPS Pre-bent Steel Riser, 36" Vertical Leg X 36" Horizontal Leg, Epoxy Coating, High-Density Black Plastic, Moisture Seal, Plain End Pigtail

Risers

8.5 Steel Encased Pre-bent Risers With Plastic Carrier Pipe



Risers

8.6 Steel Encased Straight Risers With Plastic Carrier Pipe

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
R.W. Lyall	COLGS200200B	2" (SDR-11) X 2" MIPS Straight Steel Riser, 32" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, with Studs and Mounting Stake
Perfection	75905	2" (SDR-11) X 2" MIPS Straight Steel Riser, Grey Epoxy Coated, 32" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 8" Plain End Pigtail
	75905010	2" (SDR-11) X 2" MIPS Straight Steel Riser, Grey Epoxy Coated, 32" Length, High-Density Black Plastic, Butt Fusion Ell, 8" Plain End Pigtail
	75906	2" (SDR-11) X 2" MIPS Straight Steel Riser, Grey Epoxy Coated, 32" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 8" Perma-Sert End Pigtail
	75906010	2" (SDR-11) X 2" MIPS Straight Steel Riser, Grey Epoxy Coated, 32" Length, High-Density Black Plastic, Butt Fusion Ell, 8" Perma-Sert End Pigtail
	75911	2" (SDR-11) X 2" MIPS Straight Steel Riser w/Two 3/8-16 X 1-1/2" Welded Studs, Grey Epoxy Coated, 32" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 8" Plain End Pigtail
	75911011	2" (SDR-11) X 2" MIPS Straight Steel Riser w/Two 3/8-16 X 1-1/2" Welded Studs, Grey Epoxy Coated, 32" Length, High-Density Black Plastic, Butt Fusion Ell, 8" Plain End Pigtail
	79896	2" (SDR-11) X 2" MIPS Straight Steel Riser w/Two 3/8-16 X 1-1/2" Welded Studs, Grey Epoxy Coated, 32" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 8" Perma-Sert End Pigtail
	79896010	2" (SDR-11) X 2" MIPS Straight Steel Riser w/Two 3/8-16 X 1-1/2" Welded Studs, Grey Epoxy Coated, 32" Length, High-Density Black Plastic, Butt Fusion Ell, 8" Perma-Sert End Pigtail
	78530	3" (SDR-11.5) X 3" IPS Weld End Straight Steel Riser, Grey Epoxy Coated, 33" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78530100	3" (SDR-11) X 3" IPS Weld End Straight Steel Riser, Grey Epoxy Coated, 33" Length, High-Density Black Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78531	3" (SDR-11.5) X 3" MIPS Straight Steel Riser, Grey Epoxy Coated, 27" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78531010	3" (SDR-11) X 3" MIPS Straight Steel Riser, Grey Epoxy Coated, 27" Length, High-Density Black Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78565	4" (SDR-11.5) X 4" IPS Weld End Straight Steel Riser, Grey Epoxy Coated, 48" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 6" Plain End Pigtail

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Risers

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
	78565010	4" (SDR-11) X 4" IPS Weld End Straight Steel Riser, Grey Epoxy Coated, 48" Length, High-Density Black Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78566	4" (SDR-11.5) X 4" MIPS Straight Steel Riser, Grey Epoxy Coated, 27" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 6" Plain End Pigtail
	78566010	4" (SDR-11) X 4" MIPS Straight Steel Riser, Grey Epoxy Coated, 27" Length, High-Density Black Plastic, Butt Fusion Ell, 6" Plain End Pigtail
USPoly (R.W. Lyall)	255000820000	2" (SDR-11) X 2" MIPS Straight Steel Riser, 30" Length Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail
Energy Control Systems	SR-1MPTX1BF-2406-10	1-1/4" (SDR-10) MDPE X 1-1/4" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-1MPTX1CS-2406-10	1-1/4" (SDR-10) MDPE X 1-1/4" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Pigtail Con-Stab End, Epoxy Coated, Moisture Seal
	SR-2MPTX2BF-2406-11	2" (SDR-11) MDPE X 2" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-2MPTX2CS-2406-11	2" (SDR-11) MDPE X 2" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Pigtail Con-Stab End, Epoxy Coated, Moisture Seal
	SR-3MPTX3BF-2406-115	3" (SDR-11.5) MDPE X 3" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-3WEPX3BF-2406-115	3" (SDR-11.5) MDPE X 3" Weld-End Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-4MPTX4BF-2406-115	4" (SDR-11.5) MDPE X 4" MIPS Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-4WEPX4BF-2406-115	4" (SDR-11.5) MDPE X 4" Weld-End Straight Steel Riser, 30" Length, Medium-Density Yellow Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-1MPTX1BF-3408-11	1-1/4" (SDR-11) MDPE X 1-1/4" MIPS Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-1MPTX1CS-3408-11	1-1/4" (SDR-11) MDPE X 1-1/4" MIPS Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Pigtail Con-Stab End, Epoxy Coated, Moisture Seal
	SR-2MPTX2BF-3408-11	2" (SDR-11) MDPE X 2" MIPS Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-2MPTX2CS-3408-11	2" (SDR-11) MDPE X 2" MIPS Straight Steel Riser, 30" Length High-Density Black Plastic, Butt Fusion Ell, 12" Pigtail Con-Stab End, Epoxy Coated, Moisture Seal

Risers

<u>Manufacturer</u>	<u>Part No.</u>	<u>Description</u>
	SR-3MPTX3BF-3408-11	3" (SDR-11) MDPE X 3" MIPS Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-3WEPX3BF-3408-11	3" (SDR-11) MDPE X 3" Weld-End Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-4MPTX4BF-3408-11	4" (SDR-11) MDPE X 4" MIPS Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal
	SR-4WEPX4BF-3408-11	4" (SDR-11) MDPE X 4" Weld-End Straight Steel Riser, 30" Length, High-Density Black Plastic, Butt Fusion Ell, 12" Plain End Pigtail, Epoxy Coated, Moisture Seal



Mobile Home Gas Connectors

9.1 Approved Flexible and Corrugated Tubing

Mobile (Manufactured) Home Gas connectors shall be UL listed and in conformance with the current edition of either the National Fuel Gas Code (ANSI Z223.1 / NFPA 54) or the International Fuel Gas Code (ICC) as specified by Title 24 HUD.

Manufacturers of Approved Materials

10.1 Contact Information

Appalachian Piping
Route 76, Box 16
Glennville, WV 26351
304-462-5751

Cresline Plastic Pipe Co, Inc.
2500 South 35th Street
Council Bluffs, IA 51501
712-322-2294
<http://www.cresline.com/>

Harco Corporation (Corrpro)
1090 Enterprise Drive
Medina, OH 44256
330-723-5082
<http://www.corrpro.com>

Bredero Price Company
Division of Dresser Industries
3100 East 31st Street
P.O. Box 1008
Lorain, OH 44055
440-277-7233

Dresser Piping Specialties
41 Fisher Avenue
Bradford, PA 16701
814-368-3131
<http://www.dressercouplings.com/>

Inner-Tite Corporation
110 Industrial Drive
Holden, MA 01520-1893
508-829-6361
<http://www.inner-tite.com/>

Central Plastics Co.
(Schuler Manufacturing Company)
1901 W. Independence Street
Shawnee, Oklahoma 74801
800-654-3872
<http://www.centralplastics.com/>

Dura-Bond Coating, Inc.
3200 Youghioghney Road
P.O. Box 698
McKeesport, PA 15134
412-672-9716
<http://www.dura-bond.com/>

Kerotest Manufacturing Corp.
5500 Second Avenue
Pittsburgh, PA 15207
412-521-4200
<http://www.kerotest.com/>

Charter Plastics
221 South Perry Street
P.O. Box 770
Titusville, PA 16354
814-827-9665
<http://www.charterplastics.com/>

Endot Industries, Inc.
60 Green Pond Road
Rockaway, NJ 07866
800-443-6368
<http://www.endot.com/>

Koppers Industries, Inc.
Koppers Building
436 7th Avenue
Pittsburgh, PA 15219
412-227-2001
<http://www.koppers.com/>

Chicago Fittings
1425 Lake Avenue
Woodstock, IL 60098
815-334-8000
<http://www.chicagofittings.com/>

Energy Control Systems, Inc.
101 Hafner Avenue
Pittsburgh, PA 15223
800-274-8501
<http://www.ecsi4gas.com/home.htm>

R. W. Lyall & Company, Inc.
P.O. Box 2259
Corona, CA 91718-2259
800-535-9255
<http://www.rwlyall.com/>

Columbia Fabrication Shop
8284 Columbus Road
PO Box 1210
Mount Vernon, OH 43050
888-256-3638, ext. 442

Flying W Plastics
P.O. Box 759
Glennville, WV 26351
304-462-5779
<http://www.flyingwplastics.com/>

A. Y. McDonald Mfg. Company
P.O. Box 508
Dubuque, IA 52004
319-583-7311
<http://www.aymcdonald.com/>

Continental Industries, Inc.
P.O. Box 994
Tulsa, OK 74101
918-627-5210
<http://www.conind.com/>

L.B. Foster Company
Utilities Coating Plant
1195 Salt Springs Road
Mineral Ridge, OH 44440
330-652-1461
<http://www.lbfoster.com/>

Mechanical Specialties
3015 S. 163rd St.
New Berlin, WI 53151
262-784-8180
<http://rwlyall.com/>

Manufacturers of Approved Materials

10.1 Contact Information

Midwest Pipe & Rebar Coating, Inc.
925 Kennedy Avenue
Scherverville, IN 46375
219-322-4564
<http://www.midwestpiperebar.com/>

Parker-Hannifin Corp.
Instrumentation Connector Division
P.O. Box 4288
Huntsville, AL 35802-4288
205-881-2040
<http://www.parker.com/>

PolyPipe, Inc.
PO Box 390
2406 N I-35
Gainesville, TX 76240
800-433-5632
<http://www.polypipeinc.com/>

Minnesota Mining & Mfg. Co. (3M)
Corrosion Protection Products Dept.
6801 River Place Boulevard
Austin, TX 78726-9000
800-722-6721
<http://www.3m.com/>

Perfection Corporation
Madison, OH 44057
800-544-6344
<http://www.perfectioncorp.com/>

Robroy Industries
River Road
Verona, PA 15147
412-828-2100
<http://www.robroy.com/>

Mueller Company
500 West Eldorado Street
P.O. Box 671
Decatur, IL 62525
800-798-3131, Ext. 7512
<http://www.muellercompany.com/>

Performance Pipe
5085 West Park Blvd., Suite 500
P.O. Box 269006
Plano, TX 75026
800-527-0662
http://www.cpchem.com/performance_pipe.asp

Royston Laboratories Div.
Chase Corporation
128 First Street
Pittsburgh, PA 15238-3223
412-828-1500
<http://www.roystonlab.com/>

National Meter
240 Baldwin Drive
P.O. Box 908
Lancaster, OH 43130
614-653-8828

Porter Coatings
P.O. Box 1439
Louisville, KY 40201
502-588-9200
<http://www.porterpaints.com/>

Silver-Line Plastics Corporation
900 Riverside Drive
Asheville, NC 28804-3115
828-252-8755
<http://www.slpipes.com/>

Nordstrom Valves Inc.
1511 Jefferson Street
Sulphur Springs, TX 75482
903-885-4691
<http://fcd.flowserve.com/>

Raychem Corporation
300 Constitution Drive
Menlo Park, CA 94025
415-361-5554
<http://www.raychem.com/>

Smith Blair-CSI
P.O. Box 5337
Texarkana, TX 75501
800-643-9705
<http://www.smith-blair.com/>

NORMAC
2570 Kaneville Court
P.O. Box 588
Geneva, IL 60134-0588
630-232-8111
<http://www.nortonmcmurray.com/>

Reilly Industries, Inc.
Suite 1500
300 North Meridan Street
Indianapolis, IN 46204
800-777-3536
<http://www.reillyind.com/>

Swagelok Company
29500 Solon Road
Cleveland, OH 44139-3492
440-248-4600
<http://www.swagelok.com/>

Oil Creek Plastics, Inc.
East Titusville
P.O. Box 385
Titusville, PA 16354
814-827-3661
<http://www.oilcreek.com/>

Reliable Mfg. Co., Inc.
4411 Carroll-Southern Road, Bldg E
Carroll, OH 43112
740-756-9373

The Tapecoat Company
1527 Lyons Street
Evanston, IL 60204
847-866-8500
<http://www.tapecoat.com/>

Manufacturers of Approved Materials

10.1 Contact Information

Telsco Industries
P.O. Box 180205
Dallas, TX 75218
214-278-6131

USPoly Company
7901 North Kickapoo
Shawnee, OK 74804
800-962-1514
<http://www.jmeagle.com/>

The Trenton Corporation
7700 Jackson Road
Ann Arbor, MI 48103
<http://www.trentoncorp.com/>

UPSCO Inc.
23 Central St.
PO Box 431
Moravia, NY 13118
315-497-1070
<http://www.upscoinc.com/>